REMARKS/ARGUMENTS

Claims 13-26 were previously pending in the application. Claims 17, 20, and 22-26 are canceled, with claims 20 and 22-26 being canceled as the claims directed to the restricted-out species; claims 13, 18, and 19 are amended; and new claims 27-31 are added herein. Assuming the entry of this amendment, claims 13-16, 18-19, 21, and 27-31 are now pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

On page 2 of the office action, the Examiner rejected claims 13-19 and 21 under 35 U.S.C. § 102(e) as being anticipated by Yamazaki. For the following reasons, the Applicant submits that all now-pending claims are allowable over Yamazaki.

Claims 13-16, 18-19, 21, and 27-29:

Currently amended claim 13 is equivalent to original claim 17 (now canceled) rewritten in independent form. Claim 13 is directed to a method of fabricating a dielectric material. The method comprises incorporating a Group V element in a Group III metal oxide, wherein said dielectric material is deposited in an atmosphere comprising a mixture of oxygen and nitrogen.

In the rejection of original claim 17, on page 3 of the office action, the Examiner simply repeated the claim language and cited col. 21, lines 35-45, and col. 3, lines 30-40, in the specification of Yamazaki. The text of col. 21, lines 35-45, reads as follows:

> The above chemical compounds can also be combined with another element. For example, it is possible to use nitrided aluminum oxide, denoted by AlN_xO_y, in which nitrogen is added to aluminum oxide. This material also not only possesses a heat radiating effect, but also is effective in preventing the penetration of substances such as moisture and alkaline metals. Note that x and y are arbitrary integers for the above nitrided aluminum oxide.

While it is true that this passage states that nitrogen is somehow added to aluminum oxide, this passage does not teach or suggest that this addition and/or the deposition of the resulting dielectric material is performed in an atmosphere comprising a mixture of oxygen and nitrogen, as explicitly recited in currently amended claim 13.

The text of col. 3, lines 30-40, reads as follows:

> Further, the base film **12** is especially effective for cases in which a substrate containing mobile ions, or a substrate having conductivity, is used, but need not be formed for a quartz substrate. An insulating film containing silicon may be formed as the base film **12**. Note that the term insulating film containing silicon indicates, specifically, an insulating film such as a silicon oxide film, a silicon nitride film, or an oxidized silicon nitride film (denoted by SiO_xN_y, where x and y are arbitrary integers) containing silicon, oxygen, and nitrogen in predetermined ratios in this specification.

First of all, the Applicant notes that this passage talks about silicon oxide, which is not "a Group III metal oxide" because silicon is not a metal and not a Group III element. In addition, there is no teaching or

suggestion whatsoever in this passage that film **12** "is deposited in an atmosphere comprising a mixture of oxygen and nitrogen," as explicitly recited in currently amended claim 13.

To summarize, the text in Yamazaki pointed to by the Examiner completely fails to teach or even suggest at least the limitation of "wherein said dielectric material is deposited in an atmosphere comprising a mixture of oxygen and nitrogen," which is explicitly recited in currently amended claim 13. Furthermore, after an examination of the entire specification of Yamazaki, the Applicant still could not find a teaching or even a suggestion from which one skilled in the art could fairly infer this claim 13 limitation. More specifically, in col. 11, lines 14-16, Yamazaki refers to an unspecified "known film deposition method;" in col. 11, lines 26-28, Yamazaki refers to crystallizing a film using a Ni catalyst; in col. 11, lines 34 and 52-53, Yamazaki mentions "spin coating" and "heat treatment," respectively; in col. 12, lines 11-13, Yamazaki talks about oxidizing in an oxygen atmosphere or in an oxygen atmosphere to which a halogen element is added; in col. 12, lines 30-47, Yamazaki talks about plasma excited ion doping using diborane and phosphine; etc. The Applicant submits that the entire specification of Yamazaki fails to teach or suggest at least the limitation of "wherein said dielectric material is deposited in an atmosphere comprising a mixture of oxygen and nitrogen," which is explicitly recited in currently amended claim 13. In view of these facts, the Applicant submits that the rejection of original claim 17 over Yamazaki is improper and should be withdrawn and that currently amended claim 13 is allowable over Yamazaki. Since claims 14-16, 18-19, 21, and 27 depend variously from claim 13, it is further submitted that those claims are also allowable over Yamazaki.

Claims 18-19 and 27-29:

Each of claims 18-19 and 28-29 specifies numerical ranges/values for the oxygen-to-nitrogen ratio in the deposition atmosphere. More specifically, claims 18 and 28 specify a range from about 24:6 to about 9:21; and claims 19 and 29 specify a value of about 18:12. The Applicant respectfully directs the Examiner's attention to the fact that, although Yamazaki implicitly talks about oxygen-to-nitrogen ratios by explaining that "x and y are arbitrary integers" (see, e.g., the above excerpted passages), those ratios are the oxygen-to-nitrogen ratios in the final compound and not in the deposition atmosphere. The Applicant submits therefore that these facts provide additional reasons for the allowability of claims 18-19 and 28-29 over Yamazaki.

Support for new claim 27 can be found, e.g., in Applicant's Fig. 1 and paragraph [0015]. Claim 27 specifies that the method includes the step of "forming the dielectric material on a substrate using the oxygen and the nitrogen from said atmosphere." The Applicant submits that Yamazaki does not teach or even suggest such a step. This fact provides additional reasons for the allowability of claim 27 over Yamazaki.

Claims 30-31:

Support for new claims 30-31 can be found, e.g., in original claims 13-15. Claim 30 is directed to a method of fabricating a dielectric material, said method comprising: incorporating a Group V element in a Group III metal oxide, wherein said Group V element is phosphorous. Claim 31 further specifies that said Group III metal oxide is aluminum oxide.

Yamazaki only talks about phosphorous in the context of boron phosphate (col. 21, line 30) and silicon oxide (col. 12, lines 14-48). The Applicant submits that Yamazaki does not teach or suggest

incorporating phosphorus into a Group III metal oxide in general or aluminum oxide in particular. It is therefore submitted that claims 30-31 are allowable over Yamazaki.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

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